## **ABSTRACT**

The present invention provides a method of producing porous structures, particles or matrixes, which may be comprised of one or a plurality of components, an apparatus for carrying out the method and particles formed in accordance with the method. The method is particularly suitable for producing porous composite or pure particles for pharmaceutical applications. In accordance with the method, a composite comprising a material such as a pharmaceutical, a biodegradable polymers and/or a biological agent is formed. The composite must further comprise a material that is soluble in supercritical fluid. Extraction of the supercritical fluid soluble material produces porous structures, which may be in the form of particles or matrixes.